Examination of this application is requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Applicants: Markku Auer et al

Attorney Docket No. 2534-00066

IN THE SPECIFICATION:

The following heading and paragraph at page 1 have been added between the title and the first line of text as follows:

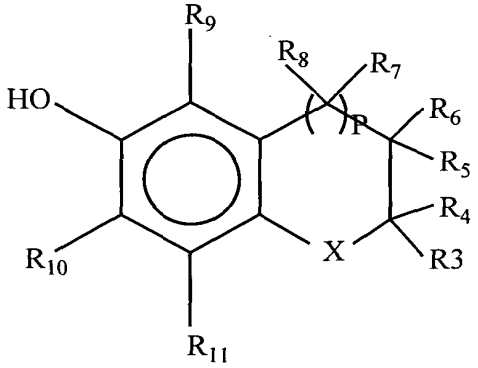
CROSS-REFERENCE TO RELATED APPLICATIONS

This application is the U.S. national stage application of International Application PCT/FI00/00585, filed June 28, 2000.

IN THE CLAIMS:

Claims 1, 4-14, 20-23, and 26-32 are amended as follows.

1. (Amended) E-vitamin derivative or a compound analogous with it, having the formula (I)



(I)

where X is an oxygen or sulfur atom, p is an integer 0 to 1, and R_3-R_{11} are identical or different groups selected from hydrogen, C_{1-6}alkyl or α-alkene having the formula (II)

$$-(CH_2)_n-(CR_1R_2)_m-(CH_2)_o-CH=CH_2 \quad (II)$$

where n, m and o are integers 0-4 independent of each other and m+n+o is an integer 1-6 and R_1 and R_2 are identical or different groups selected from hydrogen or C_{1-6}alkyl or C_{1-6}alkene, which may be substituted with an aromatic ring,

or R_7 and R_8 are together an oxygen atom and/or R_4 and R_5 and/or R_{10} and R_{11} form together with the carbon atoms to which they are bonded a benzene ring, which may be substituted with groups selected from hydrogen, C_{1-6}alkyl or α-alkene.

4. (Amended) Derivative as defined in claim 1~~ or 2~~, characterized in that one of groups R_3 and R_4 or one of groups R_5 and R_6 is hydrogen or a C_{1-6}alkyl and the other an α-alkene consistent with formula (II) and R_7-R_{11} are hydrogens or C_{1-6}alkyls.

5. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 4~~claim 1, characterized in that R_1 and R_2 are hydrogens.

6. (Amended) Derivative as defined in claim 1~~, 2 or 4-5~~, characterized in that it has formula (III), where X is oxygen, one of groups R_3 and R_4 is a methyl group and the other is an α-alkene consistent with formula (II), where n+m+o equals 1 or 2 and R_1-R_2 and R_5-R_6 are hydrogens and R_9-R_{11} are methyl groups.

7. (Amended) Derivative as defined in claim 1~~, 2 or 4-5~~, characterized in that it has formula (IV), where X is oxygen, R_1-R_4 are hydrogens, one of groups R_5 and R_6 is an α-alkene consistent with formula (II), where n+m+o equals 4, and R_9-R_{11} are methyl groups.

8. (Amended) Derivative as defined in claim 1~~ or 2~~, characterized in that one of groups R_9-R_{11} is an α-alkene consistent with formula (II) and two of the groups are hydrogens or C_{1-6}alkyls, and R_3-R_8 are hydrogens or C_{1-6}alkyls.

9. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 8~~claim 1, characterized in that R_{10} and R_{11} are hydrogens or C_{1-6}alkyls, R_9 is an α-alkene

consistent with formula (II), where n is 0 or 1, m is 0 or 1 and o is an integer 1-4 and R_1-R_2 are hydrogens or C_{1-6}alkyls.

10. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 8-9~~claim 1, characterized in that it has formula (III), X is oxygen, R_1-R_4 and R_{10}-R_{11} are methyl groups, R_5-R_8 are hydrogens and R_9 is an α-alkene consistent with formula (II), where n is 0, m is 1 and o is 3.

11. (Amended) Derivative as defined in ~~any one of claims 1, 2 or 8-9~~claim 1, characterized in that it has formula (III), X is oxygen, R_3-R_4 and R_{10}-R_{11} are methyl groups, R_5-R_8 are hydrogens and R_9 is an α-alkene consistent with formula (II), where m is 0 and o+n equals 1.

12. (Amended) Derivative as defined in claim 1 ~~or 3~~, characterized in that one of groups R_9-R_{11} is an α-alkene consistent with formula (II) and the other groups are hydrogens or C_{1-6}alkyls, and R_3-R_8 are hydrogens or C_{1-6}alkyls or R_7 and R_8 are together an oxygen atom and/or R_4 and R_5 form a benzene ring together with the carbon atoms to which they are bonded.

13. (Amended) Derivative as defined in ~~any one of claims 1, 3 or 12~~claim 1, characterized in that R_{10} is an α-alkene consistent with formula (II) where n is 0 or 1, m is 0 or 1 and o is an integer 1-4 and R_1 and R_2 are methyl groups, R_9 is a C_{1-6}alkyl, R_{11} is a hydrogen, R_7 and R_8 are together an oxygen atom and R_4 and R_5, together with the carbon atoms to which they are bonded, form a benzene ring.

14. (Amended) Derivative as defined in ~~any one of claims 1-13~~claim 1, characterized in that it is 6-hydroxy-2,5,7,8-tetramethyl-2-(but-3-enyl)-chromane, 6-hydroxy-2,5,7,8-tetramethyl-2-(prop-2-enyl)-chromane, 6-hydroxy-2,2,7,8-tetramethyl-5-(1,1-dimethyl-hex-5-enyl)-chromane, 6-hydroxy-2,2,7,8-tetramethyl-5-(prop-2-enyl)-chromane, 5-hydroxy-4,6,7-trimethyl-3-(hex-5-enyl)-benzofurane or a hydroxythioxanthone derivative.

20. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-19~~claim 17, characterized in that the olefin is ethylene, propylene, butylene and/or pentene.

21. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-20~~claim 17, characterized in that the aromatic compound is styrene.

22. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-21~~claim 17, characterized in that the copolymer consists of one olefin or styrene monomer and comonomer consistent with formula (III), (IV) or (V).

23. (Amended) Stabilized copolymer as defined in ~~any one of claims 17-22~~claim 17, characterized in that the copolymer has a substantially regular structure.

26. (Amended) Method as defined in claim 24~~ or 25~~, characterized in that the copolymerization is performed using a metallocene catalyst or its derivative.

27. (Amended) Method as defined in ~~any one of claims 24-26~~claim 24, characterized in that the catalyst used in copolymerization contains a π-cyclo-pentadienyl transition metal compound and an alumoxane compound.

28. (Amended) Method as defined in ~~any one of claims 24-27~~claim 24, characterized in that the catalyst used in copolymerization contains a π-cyclo-pentadienyl transition metal compound and a compound containing boron.

29. (Amended) Method as defined in ~~any one of claims 24-27~~claim 24, characterized in that the comonomer has been complexed to the catalyst.

30. (Amended) Method as defined in ~~any one of claims 24-29~~claim 24, characterized in that the olefin is ethylen, propylene, butylene and/or pentene.

31. (Amended) Method as defined in ~~any one of claims 24-30~~claim 24, characterized in that the aromatic compound is styrene.

32. (Amended) Method as defined in ~~any one of claims 24-31~~claim 24, characterized in that the amount of monomer and stabilizing comonomer supplied into the process is exactly defined.